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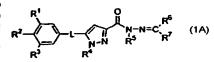
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(54) Title: ANTIBACTERIAL PYRAZOLE CARBOXYLIC ACID HYDRAZIDES



$$R^{2}$$
 $N-N=C$
 R^{5}
 R^{5}
(1B)

(57) Abstract: Compounds useful for treating bacterial infections are The compounds have disclosed. the general formula (1a, 1b) shown below: wherein R1, R2, R3, R4, R5, R6, and R7 are defined herein.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER				
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	FIELDS SEARCHED			
	m documentation searched (classification system followed by classification symbols) 5.: 514/406,403; 548/373.1-377.1			
Docume	ntation searched other than minimum documentation to the extent that such documents are included	in the fields searched		
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	OCUMENTS CONSIDERED TO BE RELEVANT			
Categor		Relevant to claim No.		
X	TORSI, C.B. et al. Monoamine oxidase inhibitors. II. Substituted dihydrazides of isoxazole - and pyrazoledicarboxylic acids. Gazzetta Chimica Italiana. 1962, Vol. 92, pages 1290-1300, especially pages 1292, 1293 and 1295.	1-3, 16-23, 31-38, 46- 55		
X.	MILYUTIN, A.V. Amide and Hydrazine of Aroylpyruvic Acids. Khimiko- Farmatsevticheskii Zhurnal. 1998, Vol. 32, No. 8, pages 24-26.			
X,P	US 2003/0157693 A1 (VERDIN et al) 21 August 2003 (21.08.2003),[0111] to [0156], and 1-6, 16-26, 31-41			
Y,P	[0215] to [0221].	55		
		7, 11-15, 27, 42		
Y,E	US 2004/0034075 A1 (SMITH et al) 19 February 2004 (19.02.2004), [0004], [0013], 1-7, 11			
A,E	[0021]-[0025], [0229]-[0245].	55		
',-		8-10, 28-30, 43-45		
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